

**Iowa Department of Natural Resources  
Environmental Protection Commission**

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**ITEM**

**8**

**DECISION**

**TOPIC**

**Contract Amendment – Salem Associates, Inc - Database Programming and Support**

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The Water Supply Operations Section requests retaining Salem Associates, Inc. for a third one-year contract renewal for database programming and support. The original contract provided for the option of three one-year renewals. This will be the final renewal period allowed according to the terms of the original contract.

The cost for this contract amendment renewal period shall not exceed \$156,000 for 2080 hours of work for 52 weeks at \$75 per hour (a \$5 per hour increase over the last two contract amendment renewal periods). The amount paid out pursuant to the original contract and previous amendments is summarized below:

Original Contract	\$ 135,200
Amendment #1	\$ 145,600
Amendment #2	\$ 145,600
<b>TOTAL PAID BY END OF AMENDMENT #2</b>	<b>\$ 424,600</b>
Amendment #3 shall not exceed	\$ 156,000
<b>TOTAL PAID OUT shall not exceed:</b>	<b>\$ 582,400</b>

This amendment shall extend the contract terms through January 31, 2009. The source of funding for this contract amendment is as follows: \$78,000.00 from the Drinking Water State Revolving Fund and \$78,000.00 from the Drinking Water Quality Protection Fund.

Salem Associates was awarded the initial one-year contract in November 2004 has filled a vital role in improving the performance of water supply program databases. During the original contract period, Salem successfully converted the Access 97 Water Supply Permit database and initial Operator Certification database to a common VB.net database. The new VB.net database now provides more reliable and faster performance, response, maintenance, and growth potential for both the central office and field offices.

Also in the first two contract amendment renewal periods, significant improvements were added to the Operation Permit, Operator Certification, and Enforcement portions of the VB.net application. The converted databases provide increased speed and improved functionality to the central and field offices, as well as maintenance uniformity.

Salem Associates has consistently demonstrated expertise in the required programming areas. This contractor now has current knowledge of DNR water supply database functions, is knowledgeable of our business rules, and has substantially complied with all the provisions of the current contract.

The contractor is currently working on three water supply database projects: the Electronic Sanitary Survey modification, the compliance module consolidation, and the annual Consumer Compliance Report. A summary of these current projects is listed below.

Several major water supply program databases remain to be converted to provide increased functionality, especially for field office access. A summary of these future projects is also listed below (see “planned projects.”). Finally, highlights of completed projects are listed at the end of this memo.

#### **Current projects:**

1. Modify/rebuild the Electronic Sanitary Survey (ESS) application. The ESS/PDA application gathers information related to public water supply sanitary surveys. Currently working on converting from a PDA based application to a tablet application.
2. Modules for two new rules, Long Term 2 Surface Water Treatment Rule and Stage 2 Disinfection By-Products Rule, are being designed and developed. Permits need to be reissued for the Stage 2 Rule in late 2007.
3. Convert the aging (and complex) annual Consumer Confidence Report that must be provided yearly to most community water supplies to work under VB.net. Also, store this report electronically to aid the compliance determination when the final report is returned from the supplies.
4. As part of compliance, add functionality to support monitoring period averages (MPA) and running annual averages (RAA). Compliance will generate candidate violations involving single/multiple samples per monitoring period over multiple monitoring periods.

#### **Planned projects for final renewal period:**

1. Complete the final phase of the Electronic Sanitary Survey (ESS) Tablet application. This will include providing transparent data transfer from the ESS application to SDWIS.
2. Make retrieval of electronic water supply documents more interactive, which would save time and effort in both the central office and field offices. A sidelight could involve using “hashing” to sign electronic storage documents, per CROMERR EPA/State workgroup.
3. Upgrade the current laboratory sample result electronic transmission program called “DirectReport” to move to the XML data format of the upcoming web enabled SDWIS/State application. This will match the federal reporting requirements.
4. Convert the remaining Access 97 programs in the Water Supply Operations and Engineering Sections to work under the VB.net “WATER” icon. Converting these to VB.net will standardize these applications and speeds up processes.
5. Put the planned SSWr2 application into production, including XML data transfer.

#### **Possible projects for final renewal period:**

1. Convert monitoring requirement tasks to specific individual periods. Currently, task due dates are “rolled over” within a single continually updated task record. Individual periods will match the SDWIS table design. Compliance actions, like monitoring or MCL violations, could then be tied back to the individual monitoring period. Better linkages would provide better tracking and a historical perspective.
2. Convert the Water Container to a Web based application. This would involve finding an alternative to Crystal Reports. Currently, the container is very dependent on Crystal for reports.
3. Add code for tracking chlorine residual in required coliform sampling, where the water supply disinfects using chlorine, to the compliance module. This is required by the rules and the EPA

is now starting to monitor this requirement. We are currently looking to move treatment from the Iowa tables to SDWIS.

### **Completed projects:**

1. The PWS Operation Permit database user interface was converted from Access 97 to VB.net. The old interface provided slow access to central office and field office locations and would disconnect during some transactions. The new user interface now provides rapid access to permit monitoring requirements and data retrieval in both the central and field offices.
2. The Operator Certification database user interface was converted from Oracle to VB.net. The new user interface allows rapid access to operator certification data by the central office and field offices for the first time on a real time basis. The field offices can also link operators to water supplies and wastewater plants, plus verify that these facilities are meeting their certification requirements. New requirements for certification and tracking for well plugging and pump installation was added to the database.
3. The PWS Enforcement database user interface was converted from Access 97 to VB.net. The number of screen forms was reduced and streamlined for data entry and retrieval. The user interface is now very responsive in both central office and field office locations, with no lag or time out issues. Interactive generation (and electronic storage) of violation letters was greatly enhanced.
4. As part of the permit and operator certification conversions, we are now for the first time capturing program documents electronically (electronically storing documents, such as permits and violations). When printing a hard copy of a document, such as the PWS Operation Permit, a copy is stored electronically at a “standard” location on a server. This is the first step toward public access to documents through Internet retrieval. This feature will be expanded in the future.
5. A single access point for all water supply VB.net programs has been developed. VB.net allows access to multiple programs through a single desktop icon. Both the new permit and operator certification user interfaces run through the common desktop “WATER” icon.
6. The PWS water sample results output program was converted to run through the “WATER” icon, providing faster access to analytical data by central and field office staff. The water supply program receives approximately 90,000 sample results each year, as federally mandated for public water supplies in Iowa. These results need to be monitored, stored, retrieved and displayed in numerous formats to support data needs.
7. A new “Change Request” program was developed for DNR staff to request and track changes to the individual programs under the “WATER” icon. This provides improved organization and documentation of requests for troubleshooting, programming and form changes.
8. The numerous PWS sampling requirement compliance code modules were being consolidated into one unified module to simplify maintenance issues. Before, we had three modules to check monitoring and reporting of sampling requirements by public water supplies through certified laboratories.
9. Modify/rebuild the Electronic Sanitary Survey (ESS) application to extract corresponding data out of the SDWIS database. Previous to this upgrade, all survey had to be reentered for each individual survey.
10. Convert the automated e-mail generation links in the Water Container from Novell GroupWise to Microsoft Exchange.

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